

Voice Activated Smart Card

## ABSTRACT

5 A portable device including a biometric voice sensor configured to detect voice information and to take an action in response to speech spoken into the voice sensor. The device also includes a voice processor configured to process the voice sensor signal characteristics. The portable device may encrypt the detected signal and may compare the detected signal characteristics with voice characteristics that are stored in a memory of the  
10 portable device for applications such as voice enabled authentication, identification, command execution, encryption, and free speech recognition. The voice sensor may include a thin membrane portion that detects pressure waves caused by human speech. The portable device may be a contact-type smart card, a contactless smart card, or a hybrid smart card with contact and contactless interfaces. The device may be powered by an internal battery or by a host via contacts or by a power signal making use of the antenna in a contactless implementation.